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BOARD OF ACTUARIES

CIVIL SERVICE RETIREMENT SYSTEM

Douglas C. Borton, F.S.A.
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Mr. Donald J. Devine
Director
Office of Personnel Management
1900 E Street, N.W.
Washington, D.C. 20415

Re: Summary of Results of Valuation as of September 30, 1982

Dear Mr. Devine:

The Board of Actuaries of the Civil Service Retirement System, which is appointed under section 8347(f) of Title 5, United States Code, is required to prepare an actuarial valuation of the System at least once every five years. The last valuation was prepared as of September 30, 1977, and was published March 17, 1980 (Committee Print 96-10).

The Board has now set the demographic and economic assumptions as to future experience for the actuarial valuation of the System as of September 30, 1982, and is now preparing a full report on the actuarial valuations that have been conducted by the staff of the Office of the Actuary in the Office of Personnel Management. This letter summarizes those assumptions and provides key cost and liability figures now, in advance of our formal report, in order to accommodate current public interest.

Demographic Assumptions

The Office of the Actuary has conducted extensive studies of the demographic experience (e.g., rates of withdrawal, death, disability, retirement, etc.) under the System for the years 1977 through 1982. The Board has decided to revise all of the demographic assumptions used for these purposes in past studies and base them on this experience. The results of these studies will be discussed more fully in our report, but in particular, withdrawal rates have declined significantly, especially for females. Mortality rates have also declined, and were reduced an additional 10 percent to allow for expected future reductions in mortality rates. The actuarial demographic rates will be made available to interested parties upon request from the Office of the Actuary. The net effect of these changes in demographic assumptions, of themselves, is to increase the normal cost under the dynamic assumptions by approximately 3.5% of payroll.

Economic Assumptions

The Board is continuing to present the valuation results using both static and dynamic economic assumptions. Static assumptions are used in the so-called "statutory valuations" which provide the basis for the actual Government contributions to the fund pursuant to the Act establishing the System. The past interpretation of this Act by the Office of Personnel Management and its predecessor, the Civil Service Commission, has been that future inflation or general schedule salary increases should not be assumed for the statutory valuation. A 5% rate of interest has been used in the past, and we have continued to use it for the current static valuation for consistency. It is our hope and recommendation that the statute can be changed to provide for the more realistic "dynamic" funding approach, which provides for some reasonable measure of the effects of future inflation.

The new dynamic assumptions are: 6.5% interest, 5.5% annual general salary increases, and 5.0% CPI increases, as contrasted with 7.0% interest, 6.5% general schedule increases and 6% CPI increases in the 1977 valuation. The choice of the 5% inflation rate was viewed as a reasonable long range rate of inflation to be assumed and is consistent with the OMB/GAO requirement for a 5% inflation rate for the report on the actuarial status of the Retirement System under P.L. 95-595. In the 1977 valuation, the "spread" between the inflation rate and the interest rate was 1%. The increase to 1.5% recognizes the recent high levels of real interest rates, but not to the full extent, since the experience is very limited when viewed in the context of the long range nature of the System's obligations.

The principal results of the valuation as of September 30, 1982 are shown in Tables 1 and 2, which present the normal cost as a percentage of payroll, and the unfunded liability, respectively.

The net effect of the revised assumptions is to reduce the normal cost by about 5% of payroll. The normal cost under the new assumption is 34.9% (including 7% employee contributions), and the unfunded liability is $512 billion. On the static basis, the comparable figures are 14.4% (normal Cost) and $260 billion (unfunded liability). A full discussion of the assumptions and their impact on the results of the valuation will be included in our report.

The other members of the Board and I will be happy to discuss these matters with you at your request.

Sincerely,

Edwin F. Boynton

Edwin F. Boynton
Chairman, Board of Actuaries

Enclosure

Table 1

CIVIL SERVICE RETIREMENT SYSTEM

Normal Cost as Percent of Payroll as of September 30, 1982

		Static	Dynamic
I.	Principal Economic Assumptions		
	A. Investment Return	5%	6.5%
	B. General Schedule Increases Added to Regular Salary Progression 1/	0%	5.5%
	C. CPI Increases	0%	5%
II.	Actuarial Valuation Results		
	A. Annuities to Employees		
	1. Optional Retirement	9.32	24.28
	2. Involuntary Retirement	1.16	2.76
	3. Disability Retirement	1.24	2.16
	4. Deferred Retirement	0.20	0.26
	5. Subtotal	11.91	29.47
	B. Annuities to Survivors		
	1. Of Age Retirees	0.92	3.41
	2. Of Disability Retirees	0.17	0.46
	3. Of Employees	0.38	0.77
	4. All Children	0.07	0.08
	5. Subtotal	1.55	4.72
	C. Lump Sum Payments less Military Deposits	0.90	0.63
	D. Administrative Expenses	0.03	0.07
	E. Total Normal Cost Pct. (A+B+C+D)	14.39	34.89
	F. Less Current Employee Contribution	7.00	7.00
	G. Employer Normal Cost Percentage (E-F)	7.39	27.89

Note: Numbers may not add due to rounding.

1/ The 5.5% General Schedule Increase is in addition to the assumed career salary scale progression which ranges from about 10% at the younger ages to about 1.5% at the older ages.

Table 2

CIVIL SERVICE RETIREMENT SYSTEM

Unfunded Actuarial Liability as of September 30, 1982
(billions)

	Static	Dynamic
I. Principal Economic Assumptions		
A. Investment Return	5%	6.5%
B. General Schedule Increases Added to Regular Salary Progression 1/	0%	5.5%
C. CPI Increases	0%	5%
II. Actuarial Valuation Results		
A. Present Value of Future Benefits		
1. Annuitants now on roll		
(a) Retired Employees	$154.3	$230.1
(b) Future Survivors of ann. now on roll	22.8	47.1
(c) Current Survivors	23.9	36.1
Subtotal	201.0	313.3
2. Separated Employees	1.5	2.0
3. Active Employees		
(a) Annuities to Employees		
(i) Optional Retirement	177.2	444.0
(ii) Involuntary Retirement	16.7	42.2
(iii) Disability Retirement	12.0	25.9
(iv) Deferred Separations	1.7	3.0
(b) Survivors	26.8	88.9
(c) Lump-sum Payments	5.0	5.6
Subtotal (a+b+c)	239.4	609.6
4. Total (1+2+3)	441.9	924.9
B. Administrative Expenses	0.9	1.8
C. Present Value of Normal Costs	86.9	318.3
D. Present Value of Military Deposits	0.0	0.2
E. Actuarial Accrued Liability (A+B-C-D)	355.9	608.2
F. Assets 9/30/82	96.1	96.1
G. Unfunded Actuarial Liability (E-F)	$259.8	$512.1
H. Present Value of Future Installments under 8348(f)	61.4	
I. Statutory Unfunded Liability (G-H)	$198.4	

Note: Numbers may not add due to rounding.

1/ The 5.5% General Schedule Increase is in addition to the assumed career salary scale progression which ranges from about 10% at the younger ages to about 1.5% at the older ages.